

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board

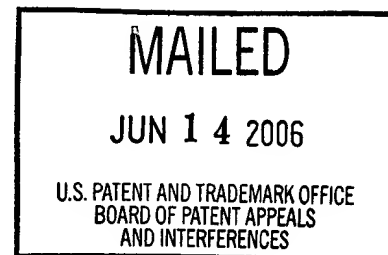
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ANDREAS HAJEK,
THOMAS HECK, STEFAN HARKE
and THOMAS WILHELM

Appeal No. 2005-2485
Application No. 09/664,241

ON BRIEF



Before WALTZ, KRATZ, and FRANKLIN, Administrative Patent Judges.
FRANKLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1-13. Claim 1 is representative of the subject matter on appeal and is set forth below:

1. Sanitary-ware moulding composition, comprising a methyl-methacrylate-based syrup and from 50 to 85% by weight, expressed in terms of the moulding composition, of an inorganic filler and further comprising elastomer particles or elastomer particle aggregates having a particle size smaller than 100 um in an amount in the range of 5% by weight to less than 20% by weight,

expressed in terms of the mass of the syrup, effective to impart to a sanitary-ware component molded from said moulding composition improved resistance to scratching as compared to a sanitary-ware component molded from a similar moulding composition devoid of said elastomer particles or elastomer particle aggregates.

The examiner relies upon the following references as evidence of unpatentability:

| | | |
|-----------------------------------|---------------|---------------|
| Hwa et al. (Hwa) | 3,661,994 | May 9, 1972 |
| Fink et al. (Fink) ¹ | 3,870,557 | Mar. 11, 1975 |
| Hofmann | 4,180,529 | Dec. 25, 1979 |
| Alsmarraie et al. (Alsmarraie) | 5,087,662 | Feb. 11, 1992 |
| Henton | WO 88/05450 | July 28, 1988 |
| Krieg et al. (Krieg*) | EPA 0,639,539 | Feb. 22, 1995 |

*An English translation is used for Krieg

Claims 1-7, 9, 10, 12, and 13 stand rejected under 35 U.S.C. § 103 as being obvious over Krieg in combination with Hwa.

Claims 1-10, 12, and 13 stand rejected under 35 U.S.C. § 103 as being unpatentable over Krieg in view of Hofmann or Henton.

Claims 1-13 stand rejected under 35 U.S.C. § 103 as being obvious over Krieg in view of Alsmarraie.

On pages 4-5 of the brief, appellants indicate the grouping of the claims. We note, however, that we consider a claim on appeal, when specific arguments regarding its patentability are provided by appellants. In the instant case, on pages 4-5 of the brief, appellants merely repeat the recitations of each of the claims. To the extent that any one claim is specifically

¹Fink is not relied upon by the examiner in the statement of rejections as a separately applied reference. See footnote 3. The U.S. patent to Fink is the equivalent to the DE 2135828 listed in footnote 3.

argued regarding its patentability, we consider such claim in this appeal. We therefore consider claims 1 and 5. See 37 CFR § 41.37(c)(1)(vii) (Sept. 7, 2004).

We have carefully considered the examiner's answer and the evidence of record, along with appellants' brief and reply brief. Our review has led us to the following determinations.

OPINION

I. The 35 U.S.C. § 103 rejection of claims 1-7, 9, 10, 12, and 13 as being obvious over Krieg in view of Hwa

The examiner's position for this rejection is set forth on pages 3-5 of the answer. Essentially, the examiner's position is that Krieg teaches appellants' claimed invention, except that the solid particulate polymer particles disclosed in Krieg are not indicated as being elastomers. Answer, page 4.

The examiner states that Hwa teaches that rigid plastic parts from poly(methyl methacrylate) can be improved by reinforcing them with elastomeric particles, wherein the elastomeric particles are grafted with an outer matrix compatible layer to improve compatibility with the rigid polymer matrix, thereby forming a core/shell structure. Answer, pages 4-5.

The examiner concludes that it would have been obvious to have used the elastomeric particles of Hwa as the solid particulate polymer particles in the poly(methyl methacrylate) composition of Krieg, for improved impact strength. Answer, page 5.

Beginning on page 8 of the brief, appellants argue that Krieg does not acknowledge any deficiency regarding impact strength, and asserts that the examiner finds such a deficiency

based on hindsight analysis, and therefore the proposed combination of Kreig in view of Hwa is incorrect.² We are not convinced by this line of argument for the following reasons.

As pointed out by the examiner, Hwa's teachings provide the motivation to utilize elastomeric particles for improved impact strength in the resultant product of Kreig. What is pertinent here is the fact that it is known in the art that the use of elastomeric particles as taught in Hwa improve impact strength of a moulded article. As such, one skilled in the art would therefore have found it obvious to utilize the elastomeric particles of Hwa in the moulding article of Kreig to improve the impact strength of a moulding article.³

At the bottom of page 8 of the brief, appellants argue that Hwa does not teach inclusion of inorganic filler particles together with elastomer particles or elastomer particle aggregates in a sanitary-ware moulding composition. However, as pointed out by the examiner on pages 3-4 of the answer, Krieg is used for teaching the aspect of the claimed invention regarding use of solid particulate polymer particles in a sanitary-ware moulding composition. Krieg teaches particulate inorganic filler and solid particulate polymerizate PP. See the English translation, the paragraph bridging pages 5-6. We are therefore

² Appellants also provide arguments in the reply brief regarding Krieg and Hwa, which we have reviewed in detail.

³ We note that on pages 6-7 of the brief, appellants argue, at length, the reference of Fink (Appellants also discuss Fink in the reply brief). The examiner does not list this reference as part of the rejection. Answer, page 3. On page 4 of the answer, the examiner discusses Fink (DE 2135828) because it is described in Krieg. Appellants' arguments regarding Fink are misplaced in that the examiner relies upon the combined references of Krieg and Hwa, or Krieg in view of Hofmann or Henton, or Krieg in view of Alsmarraie, in rejecting the claims.

not convinced by this line of argument, and note that one cannot show nonobviousness by attacking the references individually where the rejection is based on the combined teachings of the references. As explained by the Court in In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981):

The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.

On page 9 of the brief, appellants argue that column 1, lines 30-34 of Hwa discloses a teaching against including rubber particles. Appellants argue that this teaching indicates the examiner's proposed combination conflicts with Hwa. We are not convinced by this argument either. Hwa clearly teaches that the addition of rubber particles improves impact strength (the ability to withstand a rapidly applied shock). See column 1, lines 24-30. Moreover, Hwa discloses as part of their disclosed invention how the adverse affects of rubber addition can be mitigated. See, e.g., col. 2, lines 8-11 of Hwa. As stated, supra, this is sufficient motivation to combine the references as done by the examiner.

In view of the above, we affirm the 35 U.S.C. § 103 rejection of claims 1-7, 9, 10, 12 and 13.

II. The 35 U.S.C. § 103 rejection of claims 1-10, 12 and 13 as being over Krieg in view of Hofmann and Henton

The examiner's position for this rejection is set forth on pages 5-6 of the answer, and we refer to the examiner's position therein.

Beginning on page 10 of the brief, appellants again argue that the combination of references does not suggest appellants' claimed sanitary-ware moulding composition having the recited combination of constituents. Appellants again assert that the examiner appears to define a deficiency of impact strength in Krieg based on hindsight analysis. For the same reasons, discussed supra, we are not convinced by this line of argument. We further add that, as pointed out by the examiner on page 6 of the answer, Hofmann clearly teaches elastomer particles used to reinforce resilient plastics such as poly (methyl methacrylate) and refers to column 1, lines 55 to column 2, line 4, column 2, lines 31-46, column 3, lines 50-68 and column 4, lines 5-7 of Hofmann. The examiner also points out that Hofmann teaches the outer layers of the particles to optionally be crosslinked and the core elastomeric stage(s) to comprise about 60 to 95% of the particles. Answer, page 6. The examiner also discusses the Henton reference on page 6 of the answer, and we refer to the examiner's findings therein, and note that appellants do not dispute the examiner's finding of Henton.

In view of the above, we affirm the 35 U.S.C. § 103 rejection of claims 1-10, 12, and 13 as being obvious over Krieg in view of Hofmann and Henton.

III. The 35 U.S.C. § 103 rejection of claims 1-13 as being obvious over Krieg in view of Alsmarraie

The examiner's position for this rejection is set forth on page 7 of the answer, and we refer to the examiner's position therein. Appellants' position for this rejection is set forth on page 12 of the brief.

On page 12 of the brief, appellants again argue that Krieg does not disclose appellants' sanitary-ware moulding composition having the recited combination of constituents, and that the examiner appears to find a deficiency of impact strength in Krieg based on hindsight analysis. For the same reasons, discussed supra, we are not convinced by this line of argument.

Appellants also argue that Alsmarraie fails to support the combination. Appellants state that Alsmarraie does not teach the inclusion of inorganic filler particles together with elastomer particles. Brief, page 12. However, as pointed out by the examiner, Krieg clearly teaches the combination of solid particulate particles with inorganic fillers. The examiner relies upon the secondary reference of Alsmarraie for teaching that the solid particulate particles can be elastomeric.

Answer, page 7.

Appellants also argue that there is no teaching in Alsmarraie that the particles described therein can be included in any polymeric system whatsoever, much less a sanitary-ware moulding composition. Appellants argue that Alsmarraie involves a polymer composition based on a matrix forming polymer which includes polycarbonate resins, polyester resins, and polyphenyleneether resins, that are different from appellants' claimed sanitary-ware moulding composition. Brief, page 12. We are not convinced by this argument for the following reasons.

On page 7 of the answer, the examiner points out that Alsmarraie teaches elastomer particles used to reinforce thermoplastics, wherein the elastomer particles comprise a polyorganosiloxane elastomeric core, and wherein at least one outer layer is a matrix compatible layer made from a monomer such as methyl methacrylate, grafted together with crosslinking

monomers, and the core elastomer stage comprises about 50 to 95% of the particles. The examiner concludes that it would have been obvious to use the elastomeric particles of Alsmarraie as the solid particulate polymer particles in the poly(methyl methacrylate) composition of Krieg to improve impact strength as taught by Alsmarraie, and the examiner refers to column 5, lines 10-14, column 7, lines 12-31, column 12, lines 13-26 of Alsmarraie, in this regard.

Hence, as pointed out by the examiner Alsmarraie teaches that the elastomer particles can be utilized as an impact strength modifying agent for thermoplastics. Krieg concerns a method for producing filled moulding particles on a polymethyl methacrylate base. We are not convinced that the use of the elastomer particles of Alsmarraie are not compatible with such a base. While appellants assert that the matrix of Alsmarraie is different, appellants do not provide persuasive arguments/evidence regarding why substitution of the particles taught in Alsmarraie for the particles taught in Krieg would be incompatible.

In view of the above, we therefore affirm the 35 U.S.C. § 103 rejection of claims 1-13 as being obvious over Krieg in view of Alsmarraie.

IV. Conclusion

Each of the rejections is affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(iv) (effective Sept. 13, 2004).

AFFIRMED

Thomas A. Waltz)
Administrative Patent Judge)


Peter F. Kratz
Administrative Patent Judge

BOARD OF PATENT
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INTERFERENCES

Beverly A. Franklin
Administrative Patent Judge

BAF/cam

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